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PROCESSES AND PROPERTIES INDEX																																																											
<i>BC</i> <i>B-I-8</i> Treatment of waste from magnesite industry. A. K. RASPOVA and A. I. KASANOVA (Kali, 1955, No. 3, 18-55).—Waste from carnallite and $MgCl_2$ extraction after heating at a high temp., contains 20-30% MgO. The gangue waste is dissolved in hot HCl and sufficient HCl added to form car- nallite, which crystallizes on cooling. <i>Ch. Abstr. (c)</i>																																																											
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CA 2

Relation between dehydration and hydrolysis of magnesium chloride on heating the crystalline salt. I. G. SOCHERBAKOV AND A. K. RASOPINA *Kalin* (U. S. S. R.) 1932, No. 10, 16-19; cf. C. A. 27, 1202. —The gradual heating of $MgCl_2 \cdot 6H_2O$ to 300°C and then raising the temp. higher to the fusion of the dried salt showed the following relation between $H_2O\%$ (y) and MgO (x) in the dried product: $-dy/dx = kv^2$. JAMES SCHREI.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

CIA-RDP86-00513R0013442

1ST AND 2ND COPIES										3RD AND 4TH COPIES									
PROCESS AND PROPERTIES INDEX																			
BC B-1-8 Dehydration of magnesium chloride. J. O. Scamman, and A. E. Rogers (Kali. Engrs., 1928, No. 3, 21-22; No. 4, 12-13). $MgCl_2 \cdot 6H_2O$ is fused to form MgO, MgO and, mixed with O before solidification, the mixture is dehydrated at 250°, treated with Cl_2 and heated at 250° ($MgCl_2 + MgO \rightarrow MgCl_2 + H_2O$; $MgO + O \rightarrow MgO \rightarrow MgCl_2 + O_2$). The product contained 0.5-1% MgO, and no Cl_2 was lost in the outgoing gases. Ca. Ann.																			
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PROCESSING AND PREPARATION			
CP Dehydration of magnesium chloride. I. G. SHCHERBAKOV AND A. K. KASPOFINA. <i>Kalini</i> (U. S. S. R.) 1932, No. 8, 25-9; No. 9, 23-5.—A low-temp. method (300-400°) for dehydration of $MgCl_2 \cdot 6H_2O$ is shown. $MgCl_2 \cdot 6H_2O$ was fused to convert the salt to $MgCl_2 \cdot 2H_2O$ and intimately mixed with charcoal before it solidified. Then Cl_2 gas was passed through the mixt., which was first heated to 300° to complete dehydration. The salt at this stage contained 10-15% MgO. Then the temp. was raised to 400° to convert MgO to $MgCl_2$: $2HCl + MgO = MgCl_2 + H_2O$, $2MgO + C + 2Cl_2 = 2MgCl_2 + CO_2$. The final dehydrated product contained 0.5-1.00% MgO, with no loss of Cl_2 in outgoing gases. The quantity of Cl_2 required for the chlorination of MgO in dehydrated $MgCl_2$ in the presence of charcoal is detd. Dehydration with Cl_2-air mixt. is studied. JAMES SORREL		18	
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION			
SOURCE DIVISION		SOURCE DIVISION	
SOURCE DIVISION		SOURCE DIVISION	

CP 18

Preparation of anhydrous magnesium chloride by action of chlorine on magnesium oxide in presence of carbon. I. G. SHCHERBAKOV AND A. K. KAMPOFINA *Tech Urals* 7, No. 5 0, 16-20(1931); cf. C. A. 27, 568, 1455, 1897. Reaction begins at 281° and is nearly complete at 300°, when a product contg. 1-1.5% MgO may be obtained. At 500°, with a small excess of Cl₂, the product contains < 0.5% MgO. The reaction is: $2\text{MgO} + 2\text{Cl}_2 + \text{C} \rightarrow 2\text{MgCl}_2 + \text{CO}_2$, but the gas contains about 12% CO.

H. C. A.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

18

Ca

Treatment of waste from magnesite industry. A. K. Ryzhikov and A. I. Kryazova. *Kolli* 1933, No. 3, 18-20. Waste from carnallite and $MgCl_2$ extn., after heating to a high temp., contains 20-50% MgO . Treatment of the prod. waste consisted in dissolving it in hot HCl and adding sufficient KCl to form carnallite, which crystallizes from the soln. on cooling. S. L. M.

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

CIA-RDP86-00513R0013442

BELYAYEV, V.N., dots., kand. tekhn.nauk; BOGATYREV, I.S., kand. tekhn. nauk; BULANZHE, A.V., dots.; VYBORNOV, P.V., st. prepod.; GADOLIN, V.L., dots., kand. tekhn. nauk; GOFMAN, E.I., dots.; DROZDOV, N.A., dots., kand. tekhn.nauk; ZAYTSEVA, L.I., inzh.; IVANOV, V.N., dots., kand. tekhn. nauk; KOROVIN, B.I., dots., kand. tekhn. nauk; LUKIN, V.I., dots., kand. tekhn.nauk; MORIN, I.S., dots., kand. tekhn. nauk; OGRINCHUK, I.A., inzh.; PALOCHKINA, N.V., inzh.; POLYAKOV, D.G., dots.; FARGIN, D.P., kand. tekhn.nauk[deceased]; RASPOPOV, A.G., st. prepod.; RESHETOV, D.N., prof., doktor tekhn. nauk; KASPEROVICH, N.S., inzh., red.; TIKHANOV, A.Ya., tekhn. red.

[Machine parts; atlas of designs] Detali mashin; atlas konstruktssii. Izd.2., perer. i dop. Moskva, Mashgiz, 1963.363 p.
(MIRA 16:12)

1. Kollektiv kafedry "Detali mashin" Moskovskogo vysshego tekhnicheskogo uchilishcha im. Baumana (for all except Kasperovich, Tikhonov).

(Machinery—Design and construction)

LUKICHEV, D.M., kandidat tekhnicheskikh nauk; NIKONOROV, V.A., inzhener;
~~PASPOPOV, A.S., inzhener.~~

The Moscow Technical College's roller station for testing locomotives. [Trudy] MVTU no.43:6-23 '55. (MLA 9:8)
(Locomotives--Testing)

BELYAYEV, V.N., dots., kand. tekhn. nauk; BOGATYREV, I.S., dots.,
kand. tekhn. nauk; BULANZHE, A.V., dots.; VYBORNOV, P.V.,
st. prepod.; GADOLIN, V.L., dots., kand. tekhn. nauk;
GOFMAN, E.I., st. prepod.; DROZDOV, N.A., dots., kand.
tekhn. nauk; ZAYTSEVA, L.I., inzh.; IVANOV, V.N., dots.,
kand. tekhn. nauk; KOROVIN, B.I., dots., kand. tekhn. nauk;
LUKIN, V.I., dots., kand. tekhn. nauk; MORIN, I.S., dots.,
kand. tekhn. nauk; OGRINCHUK, I.A., inzh.; PALOCHKINA, N.V.,
inzh.; POLYAKOV, D.G., dots.; PARGIN, D.P., kand. tekhn. nauk;
RASPOPOV, A.G., st. prepod.; RESHETOV, D.N., prof., doktor
tekhn. nauk; STOLBIN, G.B., dots., kand. tekhn. nauk, retsenzent;
KASPEROVICH, N.S., inzh., red.; SMIRNOVA, G.V., tekhn. red.;
UVAROVA, A.F., tekhn. red.

[Machine parts; atlas of designs] Detali mashin; atlas kon-
struktsii. Moskva, Mashgiz, 1962. 346 p. (MIRA 15:3)

1. Kafedra "Detali mashin" Moskovskogo vysshego tekhnicheskogo
uchilishcha im. Baumana (for all except Stolbin, Kasperovich,
Smirnova, Uvarova).

(Machinery--Design)

RASPOPOV, A.P., doktor med.nauk

Professor Miron Grigor'evich Dodin; on his 90th birthday.
Vest.otorin. 21 no.3:103 My-Je '59. (MIRA 12:9)
(BIOGRAPHIES
Grigor'evich, Miron G. (Rus))

RASPOPOV, A. P.

354/9. K voprosu o latentnykh tuberkuleznykh ocha akh v portani. Byulleten'
In-ta tuberkuleza akad. Med. Nauk SSSR, 1949, No. 3, c. 35-39.

Letopis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949

Raspopov, H.T.

AGEYEVA-MAYKOVA, O.G.; VOYACHEK, V.I.; YERMOLAYEV, V.G.; KULIKOVSKIY, G.G.;
LIKHACHEV, A.G.; NEYMAN, L.V.; RASPOPOV, A.P.; SUPRUNOV, V.K.

Boris Sergeevich Preobrashenskiy; 60th anniversary of birth. Vest.
otorinolar., Moskva 14 no. 3:97-100 May-June 1952. (CLML 22:4)

1. Preobrashenskiy is editor of Vestnik oto-rino-laringologii and
attached to the Therapeutic Sanitary Administration for the Kremlin.
Is Active Member of the Academy of Medical Sciences USSR. Awarded
Order of Lenin in 1943. Is Chairman of the Administration of the
All-Union Society of Otolaryngologists.

RASPOPOV, A.P.

Albucid-sodium in the treatment of chronic otitis media. Vest.
otorinolar., Moskva 14 no. 5:71 Sept-Oct 1952. (GLML 23:3)

1. Doctor Medical Sciences. 2. Moscow.

RASPOPOV, B., inzh.

Faster than the wind. IUn.tekh. 7 no.11:78-80 № '62.

(MIRA 15:12)

(Iceboats)

RASPOPOV, B. D.

RASPOPOV, B.D.

[Speed demon] Master skorosti. Moskva, Fizkul'tura i sport, 1953.
68 p. (MLRA 7:7)

(Automobile racing)

RASPOPOV, B.M. (Frunze)

Optimal response time for uncorrelated heat and mass transfer
processes. Avtom. i telem. 26 no.10:1857-1861 O '65.

(MIRA 18:10)

RASPOPOV, B.P.

Repairing gear pumps with a worn-out casing. Vest.mash. 33 no.5:79 My '53.
(MLRA 6:5)

1. Kievskiy avtoremontnyi zavod.

(Pumping machinery)

GELLER, E.; RASPOPOV, I.

Resistance of larvae and eggs of the *Amidostomum anseris* to the
Kursk winter. Uch.zap.Kursk.gos.ped.inst. 12:70-73 '61.
(MIRA 17:4)

1. Kafedra zoologii Kurskogo gosudarstvennogo pedagogicheskogo
instituta.

RASPOPOV, I A,

6790¹⁸ (Russian) Smelting of Fluxed Sinter, Made of Krivoy
Rog Iron Ores, in the Blast Furnace. Domennaya plavka
osliuzhennogo aglomerata iz krivorozhskikh rud. I. V.
Raspopov, Ia. P. Kulikov, Ia. S. Gorbunov, and G. D. Murguev.
Zhur., v. 17, Feb. 1957, p. 109-103.

pg 111

RASPOPOV, I. M.

Dissertation: "Natural Restoration of the Oak Forests of the Crimean State Forest Preserve." Cand Geog Sci, Leningrad State U, Leningrad, 1953. (Referativnyy Zhurnal--Geologiya/Geografiya, Moscow, Aug 54)

SO: SUM 393, 28 Feb 1955

1. RASPOPOV, I. M.
2. USSR (600)
4. Phytoncides
7. Reaction of phytoncides of certain plants on insects. Priroda 42, No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

RASPOPOV, I.M.

Plants and ticks. Priroda 42 no.11:115 N '53.

(MLA 6:11)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
(Forest insects)

RASPOPOV, I.M.

Method of studying profiles of tree crowns. Bot.zhur.40 no.6:825-827
N-D '55. (MIRA 9:4)

1.Leningradskiy gosudarstvennyy universitet imeni A.A.Zhdanova.
(Forests and forestry--Mensuration)

RASPOPOV, I.M.

Higher aquatic vegetation in small bodies of water located between the Khoper and Medveditsa rivers. Trudy Lab. ozeroved. 7:112-117
'58. (MIRA 11:10)

1. Laboratoriya ozerovedeniya AN SSSR.
(Khoper Valley--Fresh-water flora)
(Medveditsa Valley--Fresh-water)

RASPOPOV, I.M.

Floating mats formed by *Poa palustris* L. Bot. zhur. 43 no.1:112-114
Ja '58. (MIRA 11:2)

1. Laboratoriya oserovedeniya AN SSSR, Leningrad.
(Vyazovka District (Balashov Province)--Meadow grass)
(Ponds)

30(1)
AUTHOR:

SOV/26-59-2-37/53
Raspopov, I.M., Candidate of Geographical Sciences
(Leningrad)

TITLE:

The Vegetation in a Spring-Fed Bog in the Crimean Mountains (Rastitel'nost' klyuchevogo bolota Krymskikh gorakh)

PERIODICAL:

⁴⁸
Priroda, 1959, Nr 2, pp 110-111 (USSR)

ABSTRACT:

The author describes two adjacent spring-fed bogs on the steep southern slope of the spurs of Malaya Chuchel' Mountain in the center of the Krymskiy zapovednik im. V.V. Kuybysheva (Crimean Forest Reservation imeni V.V. Kuybyshev). An annual precipitation over 1,000 mm falls on these slopes and gives rise to many brooks and streams. The two bogs are 200 m apart trough-like folds of 85x50 and 60x40 m. They are fed by the water of small sources and have only an insignificant run-off. While the surrounding forest is made up of beech trees, black alder trees of the *Alnus glutinosa* (L. Gaertn.) species are the only trees in the two bogs. These alder trees have

Card 1/2

17 (4)

AUTHOR:

Raspopov, I. M.

SOV/20-126-5-64/69

TITLE:

On the Ecology of *Isoetes lacustris* L. (K ekologii polushnika ozernogo (*Isoetes lacustris* L.))

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 5, pp 1137 - 1138 (USSR)

ABSTRACT:

In all phylographies of the USSR (Refs 1-4) it is mentioned that the fern species *Isoetes lacustris* grows on the ground of lakes with more or less clear water. These plants are said to be scarcely found on turf ground and on muddy shores. In the year 1957 the Ladozhskaya ekspeditsiya (Lake of Ladoga Expedition) of the laboratory mentioned in the Association has found the contrary by hydrobotanical investigations on using the diving equipment: *Isoetes* grows equally frequently both on sandy and on muddy grounds. The stalk entirely sticks in the mud, the leaves to the half. This can not at all be explained by the annual collection of sedimentary material because it is here insignificant. Until now *Isoetes* was not found on muddy grounds in consequence of imperfect collecting methods. An other datum in the phylographies to be corrected is the form of the leaves at *Is. lacustris* reminding here more of *Is. tenella* (Dur. Lem.

Card 1/2

On the Ecology of *Isoetes lacustris* L.

SOV/20-126-5-64/69

et Desv.): the leaves of nearly all specimens of the cliff part of the lake of Ladoga have arched backward bended leaves although other marks suit well to the diagnosis of *Is. lacustris*. Apparently the straight figure of the leaves can not be taken as species mark of this plant. There are 1 figure and 4 Soviet references.

ASSOCIATION: Laboratoriya ozerovedeniya Akademii nauk SSSR (Laboratory of Limnology of the Academy of Sciences, USSR)

PRESENTED: March 19, 1959, by D. V. Nalivkin, Academician

SUBMITTED: February 4, 1959

Card 2/2

RASPOPOV, I.M.

Aquatic and shore vegetation of ponds in the upper section of the
Buzuluk Basin. Trudy lab. ozeroved. 9:94-127 '60. (MIRA 13:8)
(Buzuluk Valley (Stalingrad Province)—Farm ponds)
(Fresh-water flora)

RASPOPOV, I.M.

Characteristics of the filling of the Polivnoy Pond with vegetation
as related to variations in its water volume. Trudy Lab. ozeroved.
9:300-308 '60. (MIRA 13:8)
(Vyazovka District (Stalingrad Province)--Farm ponds)
(Fresh-water flora)

30
RASPOPOV, I. M.

Among the titles and authors of papers and other expected participants at the 15th International Congress of Limnology in Madison, Wisconsin, 20-25 Aug 62, are the following:

USSR

GAVERKAYA, N. S., Kaliningrad College of Fishery, Kaliningrad. "The role of high aquatic plants in trophic cycles of fresh water bodies".
 GORODKOV, K. V., Astrakhan State Reservation, Astrakhan. "The role of cellulose bacteria in biological productivity of water bodies".
 IVLEV, V. B., Sevastopol Biological Station, Sevastopol. "The role of energy on the highest trophic levels of a production process" and "Emergence of fish production" (Review Paper, Session II).
 KORDA, Nina Vital'yevna, Laboratory of Forestry, Academy of Sciences USSR. "The trophic of water bodies on different stages of their historical development".
 KROCHIN, P. V., Kamchatka Department, Pacific Institute of Marine Fishery and Oceanography. "On the connection of cloaking skin of young fish of red salmon with the condition in a lake".
 KRYZHN, Yevgeniy Mikhailovich, Kamchatka Department, Pacific Institute of Marine Fishery and Oceanography. "The influence of a dispersion of adaptation of red salmon producers on the physical regime of spawning lakes".
 KUMAROV, Sergey Ivanovich, Institute of Microbiology, Academy of Sciences USSR. "The role of microorganisms in the destruction of organic substances in a water body" and "Decomposition processes, results and limnological significance, microbiological" (Plenary Session IV).
 KUSHNEVA, Tat'yana, B. S., Hydrobiology Station, Saratov, Armenian SSR. "Was accepted invitation but has not submitted paper".
 PANKRATOVA, V. Ia., Zoological Institute, Academy of Sciences USSR. "On the evolution of tamiopoda larvae (Chironomidae) in connection with the conditions of existence".
 RASPOPOV, I. M., Laboratory of Limnology, Academy of Sciences USSR. "On the main concepts and directions of hydrobiology in the Soviet Union".
 RODINA, A. G., Zoological Institute, Academy of Sciences USSR. "Microbiology of the detritus of lakes".
 ROSCHETKO, L. L., Institute of Geography, Academy of Sciences USSR, and GRADY, Grigoriy I., Siberian Department of the Academy of Sciences USSR. "The Lake Baykal".
 SIKHOTOV, Nikolay Nikolayevich, Institute of Biology of Water Reservoirs, Academy of Sciences USSR. "Ecology of the phyto-plankton in connection with the estimation of the role of the littoral zone of the life of Volga water reservoirs".
 SOLOVYOV, O. M., Limnological Institute, Siberian Department of the Academy of Sciences USSR. "The ice regime of the Baykal Lake".
 STROGALOV, S. S., Biological Faculty, Moscow University, Moscow. "Influences of small concentrations of poisonous matter on hydro-organisms", and "On the question of the influence of sewage treatment".
 VORONIN, E. K., Limnological Institute, Siberian Department, Academy of Sciences USSR. "Turn over of the organic matter".
 YAKOVLEV, O. M., Limnological Institute, Siberian Department of the Academy of Sciences USSR. "The fauna of high mountain water bodies of Middle Asia".
 ZHABIN, V. I., Zoological Institute, Academy of Sciences USSR. "Migration of the radioactive phosphorus at fertilizing a water body".
 ZHURAVEL, P. M., Dnepropetrovsk Scientific Institute of Hydrobiology, Dnepropetrovsk. "Food organisms of hydrobiology of the State University, Ukrainian SSR. "Acclimation of fishes' food organisms from the fresh water to the brackish water (of the Caspian Pellet type) in water reservoirs of the Ukraine and the Crimea".

RASPOPOV, I.M.

Higher aquatic vegetation in the skerry region of Lake Ladoga.
Trudy Lab. ozeroved. 12:193-210 '61. (MIRA 15:3)
(Ladoga, Lake---Fresh-water flora)

KALESNIK, S.V.; ARKHANGEL'SKIY, A.M.; DAVYDOV, A.F., kand. nauk;
MALININA, T.I., kand. nauk; PETROVA, N.A., kand. nauk;
RASPOPOV, I.M., kand. geogr. nauk master sporta SSSR po turizmu;
SEMENOVICH, N.I., kand. nauk; DOBKOVICH, V.V., kand. nauk;
MATYUSHIN, V.P., kand. nauk; SLOBOZHAN, I.I., red.;
TIKHONOVA, I.M., tekhn. red.

[For you, tourists! How to conduct observations of nature
during a trip] Vam, Turisty! Kak provodit' nabliudeniia nad prirodou
v pokhode. Izd. 2 per. 1 dop. [By] A.F. Davydov i dr, Lenin-
grad, Lenizdat, 1963. 280 p. (MIRA 16:10)

1. Chlen-korrespondent AN SSSR (for Kalesnik).
(Nature study) (Tourism)

RASPOPOV, I.M. (Leningrad)

Basic concepts and trends of hydrobotany in the Soviet Union.
Usp. sov. biol. 55 no.3:453 -464, My-Je'63 (MIRA 17:3)

KONKINA, N.G.; RASPOPOV, I.M.

All-Union Conference on the Problems of the Cycle of Matter
and Energy in Lake Bodies. Vest. LGU 19 no.24:159-160 '64
(MIRA 18:1)

MALININA, T.I.; RASPOPOV, I.M.

Discussion of basic problems of Soviet limnology. Izv. Vses.
geog. ob.-va 97 no.2:202-203 Mr-Apr '65. (MIRA 18:5)

РАСПОДВ, I.M., kand. geograf. nauk (Leningrad)

16th International Limnological Congress. Priroda 54 no.11:
117-118 '65. (MIRA 18:11)

CA

Semitechnical agglomeration of magnetic concentrates from Kuzin titanomagnetite in mixtures with vanadium-containing rock. J.V. Resonov. Ural. Met. 1937, No. 4, 8-16; Chem. Zvesti. 1940, 1, 3520.—Expts. reported show that an agglomeration of Fe ores with the addn. of V-contg. rock or ores poor in Fe can be used not only in the case of Ti magnetites but also in the case of all low-grade, especially waterable Fe ores. M. G. Moore

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

AUTHOR:

RASPOPOV, I.V., Lecturer, and KILIKOV, YA.P.,
GORBANEV, YA.S., and MUGUYEV, G.D., Engineers; Metallurgical
Institute Zhdanov and "Azovstal"-Work. (Zhdanovskiy metallurgi
cheskiy institut i zavod "Azovstal").

TITLE:

Smelting of fluxed Sinter, Made of Krivoy Rog Iron Ores, in the
Blast Furnace. (Domennaya plavka oflyusovannogo aglomerata uz
krivorozhskikh rud. Russian).

PERIODICAL:

Stal', 1957, Vol 17, Nr 2, pp 99 - 103 (U.S.S.R.).
Received: 5 / 1957

Reviewed: 5 / 1957

ABSTRACT:

In a blast furnace with a useful volume of 1300 m³ a burden with
an increased basicity was melted. The gas pressure under the charge
was up to 0,8 atm. overpressure and it was blown with a constant
humidity with heating up to 850°. Beginning with March 1955 the
usual agglomerate was replaced by blast furnace burden. A report
on the working technique of the furnace follows and as a summary the
following is stated: The smelting of the agglomerate of the Krivoy
Rog iron ore which is mixed with bases of up to 1,2 is technically
possible and economically useful. By the change of the furnace
operations from usual agglomerate to one supplied with additions
(burden) with a basicity of 1,0 the specific coke consumption was
reduced by 16%, the working capacity was increased by 8,3%, self-
costs of the cast iron were lowered by 10% (without reducing its
quality) and the formation of dust from the charge was reduced.
The intensity of coke-burning in the furnace, however, diminished

PA - 2390

Melting of Fluxed Sinter, Made of Kricoy Rog Iron Ores, in the Blast Furnace.

by about $0,1 \text{ t.m}^{-3}$ per 24 hours. In order to increase furnace smelting with burden, the following is suggested: careful separation of the small particles by means of a mechanic sieve, effective averaging of raw materials, exact control of the heat conditions of the furnace. It is not useful to raise the strength or to enlarge the pieces of the agglomerate at the expense of a higher content of ferrous oxide. The reducing power of the burden is higher than that of the ordinary agglomerate. (3 tables)

ASSOCIATION: Not given

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress.

Card 2/2

133-52-4-3/40
AUTHORS: Raspopov, I. V. Docent and Gorbanev, Ya. S. and
Sviridenko, F. F., Engineers

TITLE: The Use of a High Basicity Sinter for Smelting
Phosphorus Pig Iron (Primeneniye aglomerata vysokoy
osnovnosti pri peredele fosforistykh chugunov)

PERIODICAL: Stal', 1958, Nr 4, pp 306-311 (USSR)

ABSTRACT: The use of a high basicity sinter for the intensification of the process of removal of phosphorus during the melting period was tested in the open hearth melting shop of the Azovstal' Works when smelting rail steel. Chemical composition and size distribution of raw materials used for the production of sinter - Table 1, characteristics of sinter produced under laboratory conditions - Table 2 and that produced under industrial conditions - Table 3 (sinter basicity up to 14.3). Changes in the composition of metal and slag in the course of heat when using high phosphorus iron and fluxed sinter are shown in Fig.3, similar changes when using ore - Fig.1. The comparison of operating indices of open hearth heats carried out with the use of sinter and ore are given in Table 4.

Card 1/2 Conclusions: The production of sinter with a wide range of

133-58-4-8/40

The Use of a High Basicity Sinter for Smelting Phosphorus Pig
Iron

fluxing from rich in iron and low-silica materials is possible. The melting temperature of fluxed sinter is considerably lower than the unfluxed sinter and in particular of that of raw ore. The use of highly fluxed sinter during smelting high phosphorus pig iron decreases the duration of the heat on average by one hour, 23 mins, and permits a substantial increase of the concentration of phosphorus in the slag. The increase of the cost of the mineral part of the charge is compensated by the increasing yield of steel. The productivity of open hearth furnaces increases by 9%. The following participated in the work: Professor I. G. Kazantsev, and Engineers: M. T. Bul'skiy, P. N. Slepkanov, A. G. Alimov, Ye. V. Tret'yakov and a research group of the Ukrainian Scientific Research Institute of Metals. There are 4 tables, 3 figures and 4 references, all of which are Soviet.

ASSOCIATIONS: Zhdanovskiy metallurgicheskiy institut
(Zhdanov Metallurgical Institute) and Zavod "Azovstal'"
(Azovstal' Works)

Card 2/2 1. Sintered iron--Effectiveness 2. Steel--Manufacture 3. Slags
--Properties

SCV/133-58-8-2/30

AUTHORS: Raspopov, I.v., Detsent, and Gorbanev, Ya.S.,
Gulyga, D.v., Engineers

TITLE: The Production and Smelting of Fluxed Sinter from the
Kerch Ores (Proizvodstvo i domennaya plavka
oflyusovannogo aglomerata iz Kerchenskikh rud)

PERIODICAL: Stal', 1958, Nr 8, pp 676 - 682 + 1 plate (USSR)

ABSTRACT: The production of fluxed sinter ($\text{CaO}/\text{SiO}_2 = 0.6-0.9$)
and the results of operation of blast furnaces with 80%
of sinter in the burden are described. Operating indices,
material, heat and hydrogen balances of the furnace
operation with sinters of basicities 0.16, 0.6 and 0.9
are given in Tables 4, 6, 7 and 8, respectively. Main
points: for each ton of limestone withdrawn from the
burden by increasing the sinter basicity from 0.16 to
0.6, a saving in coke of 365 kg was obtained. With
further increase in basicity to 0.9, the amount of coke
saved per 1 000 kg of limestone withdrawn from the
burden decreased to 283 kg. Above 40% of hydrogen intro-
duced into the furnace was oxidised to water. From 15
to 20% of As present in the sinter mix is removed during
sintering. Conclusions: 1) on smelting a burden
consisting of 80% of sinter and 20% of ore, an increase

Card1/2

NOV/199-58-8-2/30

The Production and Smelting of Fluxed Sinter from the Kerchensk Crea

in the sinter basicity from 0.16 to 0.6 increased the furnace output by 8% and decreased the coke rate by 8%; the cost of iron was decreased by 10 roubles/ton. The above increase in sinter basicity was accompanied by a decrease in the limestone charged directly to the furnace by 32%; 2) for further improvement of the furnace performance, better screening of sinter is necessary. There are 8 tables, 4 figures and 3 Soviet references.

ASSOCIATIONS: Zhdanovskiy metallurgicheskiy institut (Zhdanov Metallurgical Institute) and Zavod "Azovstal'" ("Azovstal'" Works)

Card 2/2

1. Sintered ores--Production
2. Blast furnaces--Operation
3. Iron--Production

KRASOVITSKIY, V.S.; RASPOPOV, I.V.; YEGNUS, R.M.

Device to determine the strength of metal mold coatings. Lit.
proizv. no.1:47 Ja '59. (MIRA 12:1)
(Molding (Founding)—Testing)

RASPOPOV, I.V.

Sintering machine. Biul. TSIICM no.3:47 '61. (MIRA 14:12)
(Sintering—Equipment and supplies)

RASPOPOV, I.V.; LUKASHOV, G.G.; PLISKANOVSKIY, S.T.; ARTYUKHOV, B.N.;
TARASOV, D.A.; ARIKHBAEV, V.V.; Primali uchastiy: ZHNYUKOV,
V.P.; NEMTSOV, N.S.; GODLEVSKIY, A.I.; LEVCHENKO, G.P.;
DEGTYAREVA, Z.I.; GORLACH, A.A.; YAKUSHECHKIN, Ye.I.

Intensifying the sintering process by air preheating and by
improving the performance of exhaust fans. Stal' 23 no.8:
679-682 Ag '63. (MIRA 16:9)

1. Zhdanovskiy metallurgicheskiy institut i metallurgicheskiy
zavod "Azovstal'."

(Sintering)

RASPOPOV, I.V.; SERDYUKOV, G.V.

New developments in research. Stal' 24 no.6:572 Je '64. (MIRA 17:9)

RASPOPOV, I.V.; SERDYUKOV, G.V.

New developments in research. Stal' 24 no.7:671 J1 '64. (MIRA 18:1)

NEMTSOV, N.S.; RASPOPCV, I.V.; BRAGIN, I.I.

Evaluating the durability of blast furnace charging units.
Stal' 24 no.12:1078-1079 D '64. (MIRA 18:2)

1. Zhdanovskiy metallurgicheskiy institut.

RASPOPOV, I.V.; SERDYUKOV, G.V.

New developments in research. Stal' 25 no.8:796 B 109. (LIRA 18:9)

NOVIKOV, V.; MATVEYEV, Yu.M.; RUTZHINSKIY, M.B.; BATIST, A.I.; IOSEEL', G.;
KOROLEV, M.; IVANTSOV, V.; ARONOV, I.; SVETLAKOV, V.; ZAYONCHIK,
L.Z.; RASPOPOV, I.V.; SERDYUKOV, G.V.; GRISHKOV, A.I.; MAKEYEV, I.F.;
DELLO, A.A.; SHUMNAYA, V.A., inzh.; SPIRYAGIN, L.P., inzh.; GRISHKOV,
A.I.; KARDONOV, B.A.; BURDIN, V.M., kand. tekhn. nauk; MOLGACHEV,
D.A., inzh.; MUZALEVSKIY, C.G.; RIVKIN, A.A.; KEYS, N.V.; KOMISSAROV,
A.I.

New developments in research. Stal' 25 no.8:842-845 S '65.
(MIRA 18:9)

TARASOV, V.P.; PASPOPOV, I.V.

Durability of the bells and hoppers on the new charging equipment.
Metallurg 10 no.10:8-11 0 '65. (MIRA 18:10)

1. Zhdanovskiy metallurgicheskiy institut.

YERSHOV, Yu.A.; RASPOPOV, L.N.; VOLKOV, K.F.

Ultraviolet irradiator for mass testing of polymers. Zav. lab.
(MIRA 19:1)
31 no.10:1272-1273 '65.

1. Institut khimicheskoy fiziki AN SSSR, Noginskiy filial.

L 00745-66 EWT(m)/EWP(j)/T RM

ACCESSION NR: AP5020961

UR/0190/65/007/008/1301/1305

AUTHOR: Raspopov, L. N.; Musayelyan, I. N.; Chirkov, N. M.; Yeremina, I. V.

TITLE: Mechanical properties of polyethylene produced in the presence of soluble catalytic systems

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 8, 1965, 1301-1305

TOPIC TAGS: solid mechanical property, polyethylene plastic, synthetic fiber, polymerization catalyst

ABSTRACT: Physico mechanical properties of polyethylene (I) obtained in the presence of soluble catalyst systems in chlorine-containing solvents, and of low pressure polyethylene (II) were compared over a wide range of molecular weights (I, $[\eta] = 0.7-12$; M. W. 21,400-170,000; II, $[\eta] = 0.9-5.5$). The strength of I exceeded that of II having the same $[\eta]$ value by 100-150 kgs/cm², indicating less branching and narrower molecular weight distribution in I. The crystallinity of different molecular weight samples of I decreased as cooling rate increased, and

Card 1/2

L 00745-66

ACCESSION NR: AP5020961

decreased somewhat with increase in molecular weight. At room temperature I was readily deformable in the $[\eta] = 1.25-1.40$ range. Elongation at break decreased and polymer strength increased as molecular weight of I increased ($[\eta] > 1.40$). The polymer strength of I ($[\eta] = 2.5-4.6$) decreased with increasing temperature, and elongation at break went through a maximum, indicating partial amorphization. The polymer strength of anisotropic samples of I increased and the elongation at break decreased as orientation temperature increased. Strengths of 90-100 kgs/mm² were attained at 80-90C compared to 50-60 kgs/mm² for II. Thus the polyethylene obtained by solution polymerization fulfills the strength and high orientation prerequisites for the manufacture of high strength fiber. Orig. art. 44.55

has: 5 figures and 1 table
ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AN SSSR)

SUBMITTED: 17Jul64

ENCL: 00

SUB CODE: MT, GC

NR REF SOV: 003

OTHER: 004

Card 2/2

SIMEONOV, L.; RASPOPOVA, M.; ILIYEVA, V.

Hematoimmune autoantibodies in some diseases of the thyroid gland before and following surgery. Probl. endok. i gorm. (MIRA 18:12)
11 no.6:40-42 N-D '65.

1. Klinika bol'nichnoy khirurgii (rukovoditel' - prof. St. Dimitrov) Vysshego meditsinskogo instituta, Sofiya, Bolgariya i khirurgicheskoye otdeleniye (zav. - prof. O.V. Nikolayev) Vsesoyuznogo instituta eksperimental'noy endokrinologii (dir. - prof. Ye.A. Vasyukova), Moskva.

GOGALADZE, A.S.; RASPOPOV, M.M.; MOIN, S.R.

Lateroscope. Vest. rent. 1 rad. 36 no. 1:60 Ja-F '61. (MIRA 14:4)
(X RAYS—APPARATUS AND SUPPLIES)

RASPOPOV, H. P.

Mellorative and hydrogeological districting of the northern part
of the Caspian Depression between the Volga River and the Ural
Mountains. Mat. VSNIGI no.20:5-31 '56. (MLRA 10:8)
(Caspian Depression--water supply)

RASPOPOV, M. P.

Calculating the underground water balance of virgin and waste lands
of the extended clayey plains of the northwestern regions of the
Caspian Depression. Mat. VSEGEI no.20:32-110 '56. (MLRA 10:2)
(Caspian Depression--Water supply)

RASPOPOV, M.P.

Concerning the term "zone of aeration" and its role in hydrogeology.
Izv.vys.ucheb.zav.; geol.i razv. 5 no.1:89-93 Ja '62.
(MIRA 15:2)

1. Leningradskiy gornyy institut imeni G.M. Plekhanova.
(Water, Underground)

RASPOV, M. P.

RASPOV, M. P. and POLYAKOV, B. V., "Quantitative Evaluation of Underground Waters With the Aid of the Equation of Water Balance," No 2, pp 94-95.
(Meteorologiya i Gidrologiya, No 6 Nov/Dec 1947)

SO: U-3218, 3 Apr 1953

RASPOPOV, M. P.

Raspopov, M. P. and Isakov, Yu. A. - "Material on the ecology of the water birds of the Mologo-Sheksnin inter-river region making up the watershed", Trudy Darvinskogo gos. zapovednika na Rybin. vodokhranilishche, Issue 1, 1949, p. 172-244.

SO: U-411, 17 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 20, 1949).

*Darvin State Reserve
and Rybinsk Reservoir*

RASPOPOV, M.P.

Underground water supply of rivers of the northeastern part of
forest-steppe and steppe regions of the European part of the
U.S.S.R. Geog.sbor.no.2:222-254 '53. (MIRA 7:2)
(Water, Underground)

RASPOPOV, M.P.

Problems of moisture circulation in subsurface soils of the north-
western part of the Caspian Depression. Izv.Vses.geog.ob-va 86 no.2:
149-155 Mr-Ap '54. (MLRA 7:6)
(Caspian Depression--Soil moisture) (Soil moisture--Caspian
Depression)

ARKHANGEL'SKIY, B.N.; BELYAKOVA, Ye.Ye.; GURNEVICH, M.S.; ZAYTSEV, I.K., red.;
ZINOV'YENVA, T.V.; MITGARTS, B.B.; MOROZOV, V.M.; PETROVA, N.A.;
KASPOPOV, M.P.; TOLSTIKHIN, N.I.; TOLSTIKHIN, O.N.; POTAPOV, V.S.,
red.; GUROVA, O.A., tekhn. red.

[Explanatory notes to a hydrochemical map of the U.S.S.R. on a
scale of 1:5,000,000] Ob"iasnitel'naya zapiska k gidrokhimicheskoi
karte SSSR v mashtabe 1: 5,000,000. Red. I.K. Zaitsev. Moskva,
Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane neдр, 1958.
138 p. (MIRA 11:7)

1. Leningrad. Vsesoiusnyy geologicheskii institut.
(Water, Underground--Maps)

RASPOPOV, N.A.

Cost of metal supports in a stope. Sbor.trud.Inst.gor.dela AN
URSR no.8:113-116 '61. (MIRA 15:2)
(Mine timbering—Costs)

RASPOPIV, N. N.

35427. Issledovanie Koroziyivosty Asfal'tovogo Beton. Trudy DNIIT (Dok. Nauch.-Inzh.-T), Vyp. 6, 1949, S. 134-58

SO: Letopis' Zhurnal'nykh Statey Vol. 34, Moskva, 1949

RASPOPOV, O.M.

Calculating the values of the second vertical potential derivative from the field of the first derivative. Izv. AN SSSR. Ser. geofiz. no.8:1213-1220 Ag '64 (MIRA 17:8)

1. Leningradskiy gosudarstvennyy universitet im. A.A. Zhdanova.

RASPOPOV, O. M.; YANOVSKIY, B. M.

Field of the vertical gradient of the Z-component of the geomagnetic field over the northwestern wing of the East Asian anomaly. Izv. AN SSSR. Ser. geofiz. no. 4:548-551 Ap '64.
(MIRA 17:5)

1. Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova.

BERDICHEVSKIY, M.N.; BRYUMELLI, B.Ye.; LANTSOV, A.Ye.; RASPOPOV, O.M.

Use of natural electromagnetic variations for studying the upper
layers of the earth. Uch.zap.IGU no.303:49-55 '62.

(MIRA 15:11)

(Electromagnetic prospecting)

KOVTUN, A.A.; RASPOPOV, O.M.

Equipment for magnetotelluric sounding. Geofiz.prib. no.8:89-97
'61. (MIRA 15:7)

(Magnetic prospecting)

S/552/60/000/027/005/008
H/000/H000

AUTHORS: Berdichevskiy, M. N., and O. M. Raspopov

TITLE: A statistical method for processing telluric current observations

SOURCE: Prikladnaya geofizika (sbornik statey), no. 27, 1960, 64-72

TEXT: The article describes a new statistical method for processing telluric current observations. The basic value determined by this method, parameter K, is expressed by the amplitudes of the telluric variations using four principal and two supplementary axes. Use of this method requires: 1) nonlinear polarization of the telluric current field; 2) quasi-sinusoidally shaped telluric pulses; and 3) parallel measuring lines for the field and base apparatus. Although the new method requires more time and a longer series of observations than the ellipse method, radio synchronization of field and base observations can be eliminated if necessary. The measurements are more stable, permitting the

Card 1/2

A statistical method (Cont.)

S/552/60/000/027/005/008
H000/H000

distance between field and base points to be increased. Practical operating procedures for use of the new method are given. There are 6 figures. There is 1 English-language reference, as follows: Kantas, K. Development in the newest geophysical research method; the Telluric. Acta Geophysica Sinica, v. 2, no. 2.

Card 2/2

KOPAYEV, V.V.; LAPINA, M.I.; RASPOPOV, O.M.

Variation method of determining magnetic properties of highly
magnetic rocks. Izv. AN SSSR. Ser. geofiz. no.9:1354-1362 S
'61. (MIRA 14:9)

1. Akademiya nauk SSSR, Institut fiziki Zemli; Leningradskiy
gosudarstvennyy universitet im. A.A.Zhdanova i Kurskaya geofiziche-
skaya ekspeditsiya.
(Zhigayevo region--Magnetic prospecting)

RASPOPOV, O.M.

Method of calculating the elements determining the position of
anomalous bodies by the data of gravity prospecting. Uch. zap.
LGU no.286:289-296 '60. (MIRA 14:3)
(Gravity prospecting)

RASPOPOV, O.M.

Anomalies of the vertical gravity gradient in mountain regions.
Uch. zap. LGU no.284-288 '60. (MIRA 14:3)
(Gravity prospecting)

BERDICHEVSKIY, M.N.; RASPOPOV, O.M.

Statistical method of working up observational data in the telluric
current method. Prikl. geofiz. no.27:64-72 '60. (MIRA 13:12)
(Electronic prospecting)

SOV/169-59-5-4532

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 5, p 38 (USSR)

AUTHOR: Raspopov, O.M.

TITLE: On the Application of the Numerov Formula to Gravitational Prospecting ✓

PERIODICAL: Uch. zap. LGU, 1958, Nr 249, pp 243 - 247

ABSTRACT: The utilization of the anomalous vertical gradient of gravity $\Delta \gamma$ opens new possibilities for interpreting the results of gravitational prospecting. In the case of a gravitational field given in a plane, the calculations can be carried out by the Numerov formula (Dokl. AS USSR, 1929, Nr 4). In order to substantiate the selection of the external and internal radii of integration, the Numerov formula was transformed into a more convenient form taking into consideration the local character of the usually observed anomalies. All calculations were carried out for the point of maximum Δg located immediately above the center of the anomalous mass of spherical form. In this way, the modified formula was obtained: ✓

Card 1/2

SOV/169-59-5-4532

On the Application of the Numerov Formula to Gravitational Prospecting

$$\Delta \tilde{v} = \Delta \tilde{v}_{l_0} + \frac{\Delta g_0}{l_0} - \frac{1}{2\pi} \int_0^{2\pi} d\alpha \int_{l_0}^R \frac{\Delta g}{l^2} dl,$$

wherein l_0 is the radius of the central zone, R is the external radius of the domain of integration. It is to be emphasized that the error in computing $\Delta \tilde{v}$ by this formula, caused by limitation of the domain of integration, has an opposite sign in comparison with the error caused by the central zone, and therefore, these errors compensate each other. To avoid significant errors in computing $\Delta \tilde{v}$ by the ordinary Numerov formula, the presumed depth of occurrence of an anomalous mass must be taken into account, when the radius of the central zone l_0 and the external radius of the domain of integration R are selected. ✓

T.S. Lebedev

Card 2/2

ACCESSION NR: AP4043137

S/0049/64/000/007/0999/1008

AUTHOR: Yanovskiy, B. M., (Doctor of physico-mathematical sciences), Bryunelli, B. Ye.,
Kovtun, A. A., Kuznetsov, N. S., Raspopov, O. M., Chicherina, N. D.

TITLE: Magnetotelluric sounding in the Central Russian Depression

SOURCE: AN SSSR. Izv. Seriya geofizicheskaya, no. 7, 1964, 999-1008

TOPIC TAGS: magnetotelluric sounding, geology, geophysics, terrestrial conductivity,
magnetotelluric profiling, electrical profile

ABSTRACT: Information published earlier on magnetotelluric sounding work in the Central Russian Depression is reviewed, and new work done in the central part of the region is described. The work was undertaken to determine the value of the total longitudinal conductivity and the depth and thickness of the poorly conducting basement. Information on the relief of the bottom of the depression is contradictory; data obtained by drilling, logging and sounding are compared. It is noted that the electrical profile of the studied region can be represented schematically as a three-layer structure with an upper layer of

Card 1/3

ACCESSION NR: AP4043137

relatively high resistivity, a layer of low resistivity and a base of high resistivity. It was with these initial data and concepts that an expedition from the Leningradskiy gosudarstvennyy universitet (Leningrad State University) began magnetotelluric sounding work in the summer of 1962. Sounding was done at four points along a profile running across the assumed strike of the axis of the depression. Several days were spent at each point. The variations of the H_x , H_y , E_x and E_y components of the electromagnetic field were recorded. Variations with different periods were recorded continuously for the period from 14 August through 4 September, 1962. A spectrum of variations from 5-10 to 2000-3000 seconds was obtained at each point. The vectors of variations in E and H in most cases were not perpendicular to one another. For periods of less than 400 seconds they were nonperpendicular by only $2-8^\circ$, but for greater periods the deviation was $10-15^\circ$. The methods and formulas used in processing the data are presented. It was found that all the curves obtained in approximately the same geological region differ in behavior in the region of small periods, indicating considerable variation in the sedimentary complex of the studied region. In addition, in the region of large periods on all the sounding curves, there was a maximum indicating an increase in conductivity at great depths. A formula for estimating the thickness of poorly conducting layers is given. The new magnetotelluric sounding data are

Card 2/3

ACCESSION NR: AP4043137

compared with drilling data. It was found that the depth of the upper surface of the well-conducting layer varies from point to point in the range 200-400 km; it is noted that variations of this scale also have been reported elsewhere in the literature. Orig. art. has: 7 formulas, 3 figures and 3 tables.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet imeni A. A. Zhdanova (Leningrad State University)

SUBMITTED: 10Jul63

ENCL: 00

SUB CODE: ES

NO REF SOV: 012

OTHER: 002

Cord 3/3

AUTHOR: Raspopov, O.M.

SOV/49-59-8-19/27

TITLE: The Character of a Vertical Gravity Gradient in Mountains

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 8, pp 1231-1234 (USSR)

ABSTRACT: The results of measurements of the vertical gravity gradient $\Delta\gamma$ in the Caucasus are tabulated on p 1232. A typical character of $\Delta\gamma$ in this region is illustrated by two examples, where the profile 1 (for points 7,11,13, 15,18,24 in the Table) and the profile 2 (points 3,4,6,8, 9,10,12,14,16) are illustrated in Fig 1,a,b. A sharp decrease of $\Delta\gamma$ in river valleys (points 17,22,31,32,34) should be noted. To verify the effect of the surface relief on $\Delta\gamma$ an analysis was made using a model representing a valley of the River Alazan. The resulting curve, Fig 1B, shows an agreement with the natural conditions. There are 1 figure, 1 table and 3 Soviet references.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet imeni
A. A. Zhdanova (Leningrad State University imeni
A. A. Zhdanov)

SUBMITTED: May 22, 1958
Card 1/1

RASPOPOV, O.M.

Calculating the vertical gradient of gravity by a given distribution
of gravity anomalies on surfaces of any form. Uch. zap. LGU 278:248-251
'59. (MIRA 13:2)

(Gravity)

RASPOPOV, O.M.

Method of calculating the effect of topographic masses on the
magnitude of a vertical gravity gradient. Uch. zap. LGU no.278:
252-262 '59. (MIRA 13:2)

(Gravity)

L 24142-65 EEC(k)-2/EWA(h)/EWT(1)/EEC(t)/EEC(m)/FCC P1-4/Po-4/Peb G1
 ACCESSION NR: AP4040718 S/0203/64/004/003/0619/0621

AUTHOR: Raspopov, O. M.; Chicherina, N. D.

TITLE: An experiment on recording geomagnetic field variations with a period of less than five seconds

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 3, 1964, 619-621

TOPIC TAGS: geomagnetic field variation, horizontal field magnetometer, short period geomagnetic variation

ABSTRACT: During 1961-1963 a horizontal-field magnetometer was developed at LGU (Leningrad State University) to measure short-period variations (less than 5 sec) in the geomagnetic field. The instrument was developed on the basis of the magnetometer designed by B. Ye. Bryunelli (S. P. Bakalinskiy, B. Ye. Bryunelli, and N. F. Krotevich. Registratsiya geomagnitnykh pul'satsiy vysokochuvstvitel'nykh magnitmetrom. Inform. byull. MGG, 1959, no. 7; B. Ye. Bryunelli, Vysokochuvstvitel'nyy H-magnitometr. Elektromagnitnoye zondirovaniye i magnitnotelluricheskiye metody razvedki. Materialy Vsesoyuzn. confer., April' 1961, Izd. LGU, 1963). A first model used single-string suspension with a natural period of 1-2 seconds.

Card 1/3

L 24142-65

ACCESSION NR: AP4040718

A later modification used metallic tension wires. In 1963 the latest form employed quartz tension wires. This instrument has high operating stability and a small temperature coefficient (V.N. Bobrov, Universal'nyy vysokostabil'nyy chuvstvitel'nyy element s nulevym temperaturnym koeffitsientom dlya magnitometrov, variometrov i mikrovariometrov, registriruyushchikh lyubuyu komponentu zemnogo magnitnogo polya. Voprosy zemnogo magnetizma. Tr. IZMIRAN, 1963, no. 18, 28). The characteristics are: scale divisions of 30 gammas/mm, a period of torsional oscillation of 0.3 sec, and a magnetic moment of 4 CGSM units. The small size of the magnetic system yields parasitic mechanical oscillations much smaller than in previous designs. They are on the order of 0.1-0.15 sec. The instrument permits recording of fluctuations with periods as low as 0.15-0.2 sec, but this possibility has not been reached in practice. Because of its sensitivity, the noise level is on the same order as the amplitude of the desired signal in this range (0.02-0.4 gammas). Periods greater than 0.3 sec, however, can be recorded much more readily, with acceptable accuracy. With a filter system, precision may lie within the limits of 0.005-0.006 gammas. Orig. art. has: 2 figures.

Card 2/3

L 24142-65

ACCESSION NR: AP4040718

ASSOCIATION: Leningradskiy Gosudarstvennyy universitet, Kafedra fiziki Zemli
(Leningrad State University, Department of Earth Physics)

SUBMITTED: 29Nov63

ENCL: 00

SUB CODE: ES

NO REF SOV: 008

OTHER: 000

Card 3/3

RASPOPOV, O. M., OCHAPOVSKIY, B. L. and SYTINSKIY, A. D.

"On the Vertical Gradient of Gravity," an article in the Scientific Notes of the Leningrad Order of Lenin State University imeni A. A. Zhdanov, No. 210, Physics Institute, Physical Science Series, No. 9, Geophysics, 1956, 190 pp.

SUM: 1360

OCHAPOVSKIY, B.L.; ~~RASPOPOV, O.M.~~; SYTINSKIY, A.D.

Vertical gradient of the force of gravity. Uch.sap.Len.un. no.210:
114-133 '56. (MLRA 9:8)

(Gravity)

RASPOPOV, O.M.

Using Numerov's formula for gravity prospecting. Uch. zap. LGU
no. 249:243-247 '58. (MIRA 11:5)
(Prospecting—Geophysical methods) (Gravity)

RASPOPOV, O.M.

Method of reducing gravity values while taking the anomalous vertical
gradient into consideration. Uch. zap. LGU no.249:248-260 '58.
(Gravity) (MIRA 11:5)

L 14644-66 EWT(1)/FCC GH
ACC NR: AT6004300

SOURCE CODE: UR/3175/65/000/026/0100/0105

AUTHOR: Kazak, B. N.; Raspopov, O. M.

57
B+1

ORG: none

TITLE: A magnetic microvariometer with automatic control
12,44,55

SOURCE: USSR. Gosudarstvennyy geologicheskii komitet. Osoboye konstruktorskoye byuro, Geofizicheskaya apparatura, no. 26, 1965, 100-105

TOPIC TAGS: geomagnetic field, automatic control, earth science instrument, magnetometer, galvanometer

ABSTRACT: The authors describe an HDZ-microvariometer developed at Leningrad State University for detailed study of short-period oscillations in the geomagnetic field during the IQSY. The device is completely automated and requires an operator only for changing the recording tape twice a day. The instrument can be used for recording periods of variation in a range of 5-600 sec. A block diagram of the instrument is given. The signal from the H-, D- and Z-magnetometers is fed to M-196 galvanometers and recorded on photographic paper. Also recorded on the magnetogram are time marks from chronometer signals. The operation of the various individual elements in

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L 14644-66
ACC NR: AT6004300

the unit is described. A battery power supply with stabilization circuits makes the device convenient for work both in observatories and under field conditions. Orig. art. has: 5 figures.

SUB CODE: 08/3/ SUBM DATE: 00/ ORIG REF: 010/ OTH REF: 000

Card 2/2 *SC*

L 05863-67 FWT(1)/FOC GW

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SOURCE CODE: UR/2950/65/000/005/0025/0026

AUTHOR: Raspopov, O. M.

ORG: Leningrad State University im. A. A. Zhdanov (Leningradskiy gosudarstvennyy universitet)

TITLE: Measuring the vertical intensity component of the Earth's magnetic field

SOURCE: EIKA, Entsiklopediya izmereniy, kontrolya i avtomatizatsii (Encyclopedia of measurement, control, and automation), no. 5. Moscow, Izd-vo Energiya, 1965, 25-26

TOPIC TAGS: geomagnetism, magnetometer, geomagnetic measurement

ABSTRACT: A brief description is given of the most commonly used methods of measuring the vertical intensity component of the geomagnetic field (the Z-component). Three such measures are considered: one absolute method (nuclear-resonance), and two relative methods (magnetometer and electrical). The essential features of each method are briefly described, and a few important mathematical expressions are given. The discussion of the magnetometer method also contains a brief description, together with block diagrams, of two Soviet-manufactured magnetometers: the M-18 and M-2. Orig. art. has: 2 figures.

SUB CODE: 08,14/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 001

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BRYUNEV I, B.Ye.; KOVTUN, A.A.; KUZNETSOV, N.S.; RASPOPOV, O.M.; CHICHERINA,
N.D.; YANOVSKIY, B.M.

Studying the structure of the Central Russian Depression by the
magnetotelluric method. Uch. zap. LGU no.324:3-16 '64
(MIRA 18:4)